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Replacement Kit ENK2/K11

4512 104 73101

SERVICE MANUAL – UNIT
Replacement Kit ENK2 / K11

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In case there are any questions concerning this manual,
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List of pages and drawings (LOPAD)

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1. Introduction and technical data

1.1. Purpose of manual

This manual describes the replacement procedure for the relay ENK2 or ENK11 in Optimus RAD / RF / C generator mains group EN as well as Mains group Thoravision relay EWDK2. The procedure became necessary because of new type of relay that is not one to one compatible for all types of application.

1.2. Item supplied

2422 132 07381	Relay 7,5kW, 230V
2422 135 04664	Auxiliary switch block (ENK2)
2422 135 04695	Auxiliary switch block (EWDK2)
2422 135 04661	RC element, surge suppressor
4512 104 73111	Set of wires (ENK2)
4512 984 24961	Instruction manual

1.3. Compatibility

Mains group	
Optimus RAD 50	4512 104 3668x
Optimus RAD 65/80	4512 104 3669x
Optimus R/F 50	4512 104 3866x
Optimus R/F 65/80	4512 104 3841x
Optimus RAD 50 Tr	4512 104 9639x
Thoravision	4512 130 0987x

1.4. Technical data

1.4.1. Tool

Standard Tool Set :

1.5. Safety information

The general legal and factory safety recommendations for this X-ray equipment and the following recommendations must be strictly observed!
Start of operation and maintenance work and, especially, electrical work must only be executed by authorized persons.

Warning!
The system/component must be switched OFF during replacement work.
Any X-ray unit produces ionizing radiation which may be harmful if not properly controlled. Therefore, it is recommended that this equipment be operated in accordance with the guidelines set down by the national council on radiation protection.

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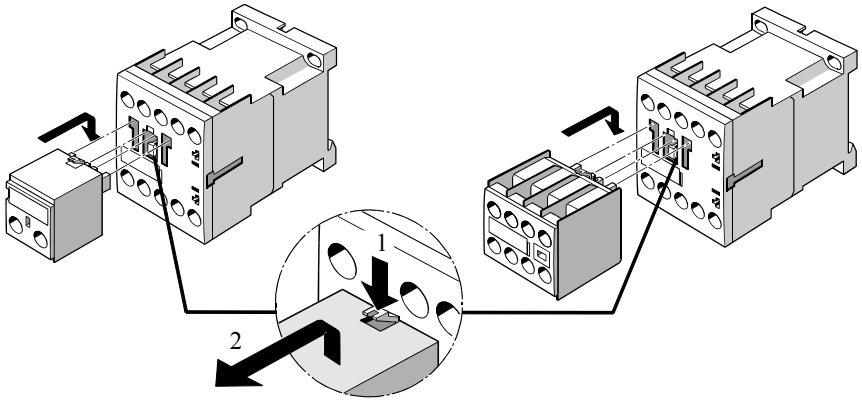
2. Replacements

2.1. Replacement procedure of FRUs

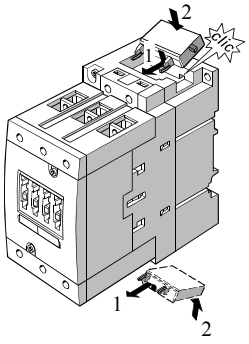
2.1.1. ENK 2

Tools required: standard tool set
Time/manpower: 1 hour / 1 engineer
Preconditions: na
Replacement procedure

- Switch the generator off.
- Open the cover of the generator cabinet.
- Disconnect all wires from ENK2.
- Remove the relay from the generator.
- Disconnect and throw away the wires from,
  ENR1:1
  ENR2:1
  ENR3:1
  ENK1:2
  ENK1:4
  ENK1:6
- Connect the new delivered wires at,
  ENR1:1 (brown with contact)
  ENR2:1 (black with contact)
  ENR3:1 (violet with contact)
  ENK1:2 brown
  ENK1:4 black
  ENK1:6 violet
- Mount the auxiliary switch block 3RH1921-1FA31 on top of the relay.



- Connect the RC element to the relay.



- Place the new delivered label “K2” on top of the auxiliary contact.

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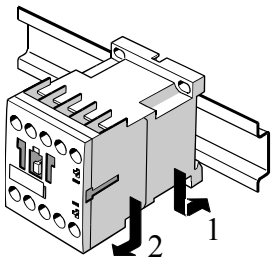
- Install the new relay into the generator.

- Place the device on the upper edge of the rail, and press it downward until it snaps onto the lower edge of the rail **(1).**
- Push the device downward to release the tension of the mounting spring, and remove the device by tilting it **(2)**.



- Connect all wires to the relay according section Drawings Z2-2.1.1 Power Supply N 50 kW or Z2-2.2.1 Power Supply N 65/80 kW of SUBSYSTEM MANUAL OPTIMUS RAD or R/F or C.
- Check all connections visually for correctness.
- Close all covers of the generator cabinet.
- Switch the generator on.
- Check all applicable functions.
- The remaining parts, auxiliary switch block and label “K11”, are not required anymore and are to be disposed of in a safe way in accordance with local Safety Regulations.

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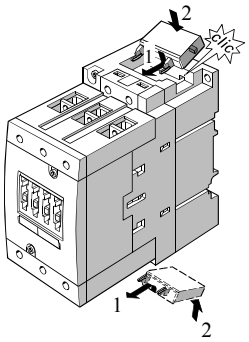
2.1.2. ENK 11

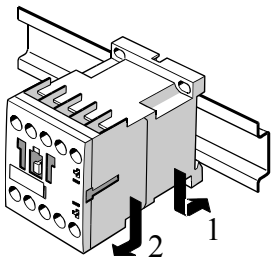
Tools required: standard tool set
Time/manpower: 1 hour / 1 engineer
Preconditions: na
Replacement procedure

- Switch the generator off
- Open the cabinet
- Disconnect all wires from ENK11.
- Remove the relay from the generator.
- Connect the RC element to the relay.



- Place the new delivered label “K11” on top of the relay.
- Install the new relay into the generator.

- Place the device on the upper edge of the rail, and press it downward until it snaps onto the lower edge of the rail **(1).**
- Push the device downward to release the tension of the mounting spring, and remove the device by tilting it **(2)**.



- Connect all wires to the relay according section Drawings Z2-2.1.2 Power Supply N 50 kW or Z2-2.2.2 Power Supply N 65/80 kW of SUBSYSTEM MANUAL OPTIMUS R/F or C.
- Check all connections visually for correctness.
- Close all covers of the generator cabinet.
- Switch the generator on.
- Check all applicable functions.
- The remaining parts, auxiliary switch block and label “K1”, are not required anymore and are to be disposed of in a safe way in accordance with local Safety Regulations.

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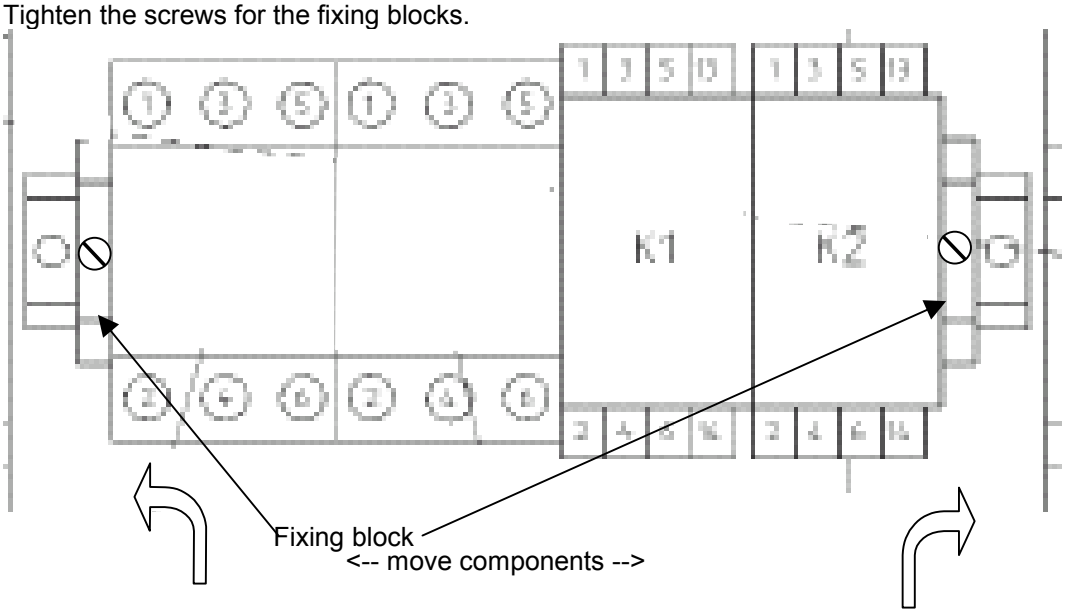
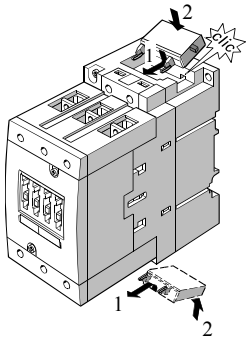
2.1.3. EWDK 1 / 2

Tools required: standard tool set
Time/manpower: 1 hour / 1 engineer
Preconditions: na
Replacement procedure

- Switch the generator off
- Open the cabinet
- Disconnect all wires from EWDK1 respectively EWDK2.
- Remove the relay from the EWD unit.
  Loosen the fixing screws of the fixing blocks.
  Move the remaining parts 10 mm to left and right end of the rail.
  Tighten the screws for the fixing blocks.



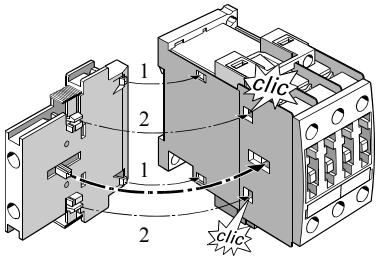
- Connect the RC element to the relay.



- Place the new delivered label “K1” or “K2” on top of the relay.
- Mount the auxiliary switch block 3RH1921-1DA11 to the **right** side of the relay.

The auxiliary switches are hooked onto the left or right side of the contactor and snapped onto it.

They are removed again by pressing the ribbed surfaces.



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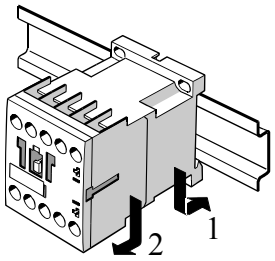
- Install the new relay into the EWD unit.

- Place the device on the upper edge of the rail, and press it downward until it snaps onto the lower edge of the rail **(1).**
- Push the device downward to release the tension of the mounting spring, and remove the device by tilting it **(2)**.



- Connect all wires to the relay according drawings Z2-1 Subsystem manual Mains group EWD to find as unit manual in the Optimus generator service manual.
- Check all connections visually for correctness.
- Close all covers of the generator cabinet.
- Switch the generator on.
- Check all applicable functions.
- The remaining parts, auxiliary switch block and label “K11”, are not required anymore and are to be disposed of in a safe way in accordance with local Safety Regulations.

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